

What is claimed is:

1. Spinel ferrimagnetic particles, a composition formula of which when prepared is $(\text{CoO})_{0.5-x}(\text{NiO})_{0.5-y}(\text{MO})_{x+y} \cdot n/2(\text{Fe}_2\text{O}_3)$ (M is a bivalent metal except Co and Ni), where,

a value of n (molar ratio) $=\text{Fe}/(\text{Co} + \text{Ni} + \text{Zn})$ is $2.0 < n < 3.0$, which is larger than stoichiometric amount ($n = 2$) of a spinel ferrite and less than that of 1.5 times, and,

values of said x, y satisfy $0 \leq x < 0.5$, $0 \leq y < 0.5$, $0 < x+y < 0.5$, wherein,

also, superparamagnetic fine particles contained in said spinel ferrimagnetic particles is 5 % by mass or less.

2. The spinel ferrimagnetic particles according to claim 1, wherein said M is a metal selected from either Zn or Mn.

3. The spinel ferrimagnetic particles according to claim 1 or claim 2, wherein:

the value of said n is $2.2 < n < 2.8$;

the values of said x, y satisfy $0 \leq x < 0.2$, $0 \leq y < 0.2$, $0.01 < x+y < 0.2$; and

superparamagnetic fine particles contained in said spinel ferrimagnetic particles is 2 % by mass or less.

4. The spinel ferrimagnetic particles according to claims 1 to 3, wherein coercivity is 239 - 637 [kA/m] and saturation magnetization is $50.3 \times 10^{-6} - 88.0 \times 10^{-6}$ [Wb · m/kg].

5. The spinel ferrimagnetic particles according to claims 1-4, prepared through a forming process comprising the steps of:

preparing mixed solutions by mixing each solution

5 containing iron, cobalt, nickel and said M as water soluble metallic salt, respectively, by satisfying said conditions of x, y, n ;

preparing solutions containing coprecipitation substance by adding an alkaline aqueous solution to said mixed
10 solutions and adjusting pH value to be $12.0 \leq \text{pH} \leq 14.0$; and
producing fine particles by heat-treating said solutions containing coprecipitation substance at $80\text{ }^{\circ}\text{C}$ - $120\text{ }^{\circ}\text{C}$, and then performing filtration, washing and drying.

6. The spinel ferrimagnetic particles according to claim 5, wherein said step of preparing said solutions containing coprecipitation substance is a step of preparing solutions containing coprecipitation substance by adjusting pH values
5 to $13.0 < \text{pH} < 13.7$.

7. A magnetic recording medium containing said spinel ferrimagnetic particles according to claims 1 - 6.